



Mixed-Use Development

A Discussion Paper of Energy Aware Communities

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Brief: Mixed-use, higher density areas encourage people to live, work, and shop within the same area by providing walkable neighborhoods with mobility options. This results in decreased dependence on automobiles to meet daily needs.

Problem

Segregated land uses often require use of personal automobiles in order to meet daily needs such as work, school, shopping, recreation, etc. Clustering and overlaying areas with different uses, especially when near public transit service, offer unique opportunities to gather a mix of pedestrian oriented uses within close proximity to one another, thus reducing reliance on automobile travel. However, in many instances, planners, local decision makers and developers have overlooked new development and redevelopment opportunities to reduce the need for private vehicles. Instead, these groups have concentrated their efforts on developments that consume acres of open space, require extensive expenditures on infrastructure, and perpetuate private auto travel. These development patterns result in sprawling, single family subdivisions, strip malls, and office parks surrounded by large impervious parking lots. At the same time, uses with less need for public transit often surround transit station areas in older urban settings and town centers, and large park-and-ride lots that discourage pedestrian access often characterize stations in more suburban settings. By failing to recognize and promote mixed-use development

opportunities that create economic and pedestrian activity; communities fail to capitalize on a key opportunity for achieving sustainable development.

Introduction

Elements of a sustainable community are interconnected and reliant upon one another for the greatest success. Among this interconnected community, mixed-use development is the hub that brings together the different aspects. Mixed-use development incorporates a mix of shops, offices, apartments, and homes within an area rather than providing for the various uses in separated areas. This allows for a range of types, sizes and prices of space in close proximity. Mixed-use development creates a community that is diverse in its population, ideally with diversity of ages, income levels, cultures and races.



Claremont Apartments in Seattle, WA

Incentives – To encourage mixed-use development, regulations need to be clear and may include incentives (streamlined permitting, higher intensity developments

allowed) to encourage the desired types of development. The codes should avoid excessively burdensome requirements, which can create too many hurdles for developers and mixed-use can become the less attractive development option. The incentives and requirements should be based on the community's goals for the development, whether it is historic preservation and revitalization, economic development, affordable housing, or other goals.

Barriers – Since the automobile has become an integral part of the American lifestyle, it is hard to imagine life without one. In a mixed-use development the need for an automobile can be significantly reduced, especially for individuals or families that live and work within the mixed-use area. In these areas, standard parking requirements do not necessarily apply. Shared parking arrangements, coupled with the reduced car ownership of residents as well as transit service, can result in reduced parking needs overall.

If the mixed-use development is set up without the elements of connectivity, walkability, transit-oriented development and others, parking may be seen as lacking. If the full array of smart growth elements¹ is present, getting to various destinations is often an easy walk, bike ride, or bus ride away.

Another potential barrier to mixed use is financing the projects. Financing mixed-use projects can be difficult. If the project's mixed-use components include retail, office, and/or multifamily, lenders may be comfortable with one property type but not

the others. This is usually because managing office space is very different than managing a multifamily project and retail management has its own set of requirements. Finding a good sponsor, developer, and operator is extremely important. It is equally important for communities to understand these overall issues and ensure any code requirements do not exacerbate them. During the development of the district standards it can be valuable to include urban planners, developers, financial institutions, and marketing specialists experienced with mixed-use developments.



Proposed Mariner's Ridge mixed-use development in Anacortes, WA

Implementation Considerations

Implementing mixed-use developmental techniques in existing communities can be difficult depending on the existing zoning codes and the enthusiasm for change within the community. Zoning codes are often the most difficult barrier to overcome. Since mixed-use development has not been the building norm for the past half century, many are unaware of the environmental and economical benefits of mixed-use for the overall community.

Scenario or visioning planning is a great way to gauge community support and help

¹ Smart Growth Principles can be viewed at <http://www.smartgrowth.org/engine/index.php/principles/>

guide the implementation of future planning. Scenario planning is flexible and allows for more creativity than conventional planning, especially in creating solutions that are not initially obvious. In scenario planning, several land use options are considered and objectively evaluated against quantifiable criteria. To begin the process a base case scenario is created. The base case scenario is a land use map and data set built upon demographic and economic data, current conditions, and existing policies and development requirements. The base case represents how the study area would be expected to develop if the current development path were unchanged. It is a very important scenario since all other alternative development scenarios will be compared to the base case to determine long term net change.

Within the three most common developmental types (rural, suburban, and urban), there are different challenges and issues with implementation. Overlay zones, versus changing the underlying zoning code, is sometimes used to allow added uses and to provide incentives to achieve local goals. Other options include amending the code for certain districts to require mixed use development and supporting development standards (e.g. building location and orientation, provisions of shared parking, pedestrian connections, parking lot connectivity, etc.) or development of a mixed-use zoning district and standards for future development or redevelopment within that district.

These can create a sense of place over a larger area, usually more so than in traditional, single-use zoning. Developing within existing towns and villages can become an attractive option, especially

when existing infrastructure is in place or planned for to serve the area with a full range of services. The rules must be clear and the review process straight-forward. The development standards and guidelines must result in a place that benefits the developer, the residents, and the community.

The longer and less predictable the approval process, the less likely it is that developers will choose mixed-use. To be successful, mixed-use districts should include a balanced and vibrant mix of compatible uses, with first floor street-front uses generally reserved for retail, restaurant, and in some cases office uses, leaving the floors above mainly for residential use.



Mixed-Use in Vancouver, WA

In addition to the first-floor street-front use provisions, communities influence street frontage through setbacks and other design standards, such as streetscape and building design provisions. Traditional regulations tend to emphasize buffering and protecting one use from others. Successful mixed-use, by contrast, encourages linkages among uses. It encourages people to walk from one use to another and to enjoy and socialize in an attractive outdoor setting.

Many design features promote this ambience, including:

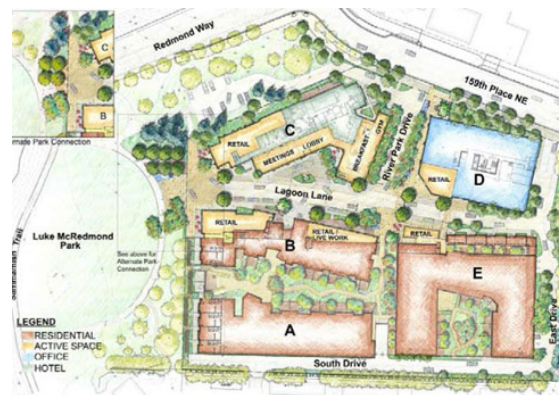
- Layout and orientation of buildings,
- Network of sidewalks and pathways,
- Location of parking relative to structures and walkways, and the amount and placement of green space, landscaping, benches, and public art,
- Provision of weather protective devices, such as awnings, canopies, marquees and overhangs, and
- Other amenities and design features.

The walkability of a mixed-use development depends on the proximity of structures and location of the entrances. One of the key benefits of mixed-use is its emphasis on walking and bicycling to reduce auto dependence. Mixed-use areas can promote walking and bicycling by including bicycle parking and storage facilities, creating a network of walkways among uses, minimizing curb cuts, and requiring that automobile parking be placed to the side or rear of structures.

Public Health – Public health is affected by mixed-use development. Specific policies can result in health benefits including increased active transport (walking and cycling) and air quality (reduced emissions from single occupant automobile use and related congestion). The reduction of private-car use is a large part of what makes mixed-use successful with the provision of other means of transportation and the ability to meet one's daily needs in close proximity to one another.

A study by Andy Haines et al. published in the medical journal *The Lancet*, shows that the reduction of greenhouse gas emissions from private automobile use helps to create cleaner air and a healthier environment to live in. Mixed-use development creates opportunity for daily exercise by placement of work, school, shops and other daily needs all within walking or bicycling distance or within reach by transit.

Design elements to encourage pedestrian and cycling mobility include connectivity, grid design, streetscape, and more. For example, the provision of alleyways behind mixed-use developments provides for deliveries without blocking traffic or on-street parking, and contributes to a safe feeling and more pleasing environment. Haines' study also states that because mixing of land uses can lead to more transportation options and more compact, mixed-use development, they inevitably have public health implications; they encourage walking, bicycling, and human interaction, with the potential to support more active, socially engaged lifestyles that result in better physical and mental health.



Riverpark Complex, just outside of Redmond Town Center, Redmond, WA

Energy Efficiency – Compact, mixed-use development generally reduces per-unit energy consumption. For example, higher

density provides more transportation choices, which allows for a reduction in vehicle miles traveled. It also facilitates use of highly efficient district energy systems to heat and cool buildings. A home's location relative to transportation choices has a large impact on energy consumption. People who live in a more compact, transit-accessible area have more housing and transportation choices compared to those who live in spread-out developments where few or no transportation options exist besides driving.



Table 1: Compares energy use to type of housing and type of development.

Choosing to live in an area with transportation options not only reduces energy consumption, it also can result in significant savings on home energy and transportation costs. Housing type is also a very significant determinant of energy consumption. Fairly substantial differences are seen in detached versus attached homes, but the most striking difference is the variation in energy use between single-family detached homes and multifamily homes, due to the inherent efficiencies from more compact size and shared walls among units.

Moderate energy efficient building technologies, such as those qualifying for Energy Star performance; also generate household energy savings that are notable but not as significant as the housing location and type. Buildings are a major user of energy. By building energy efficient structures, savings can be found with water, energy, and building materials while providing healthy indoor environments that increase worker satisfaction and productivity. In addition to the efficient use of energy in buildings, reducing fossil fuel use and the associated environmental impacts through enhanced technologies and use of alternate fuels in the transportation sector is another major component of smart energy.



The 2030 District is an interdisciplinary public-private collaborative working to create a ground breaking high-performance building district in downtown Seattle with the goal of becoming the first carbon neutral city in the country.

Examples

Mixed use development is often thought of as an “urban” form; however, it can work well in many settings and scales.

Rural Setting – Mixed-use can function well in crossroad areas, villages, and in historic rural communities. In a rural setting,

mixed-use provides people with the opportunity to arrive at a destination and complete many tasks without the need to drive from place to place. This may include vehicle fueling, picking up a few groceries, visiting the dentist, and a neighborhood retail store. Small scale vertical and horizontal mixed-use can work in this environment.

The central elements of mixed use development in a rural area are a major crossroad, one or more civic uses (such as a community building, school, church, or cemetery), and shops and businesses that serve the commercial needs of the surrounding community.

Suburban Setting – Activity centers are prime areas for incorporating medium-scale, mixed-use development within suburban landscapes. These centers could include civic and recreational uses, which are often limited in suburban settings. By including these uses, value is added to the mixed-use project, increasing appeal and marketability. *City Sense and Suburban Design: Planners' Perceptions of the Emerging Suburban Form*, a recent study done by Ajay Garde, indicates that an increasing number of suburban communities are beginning to add innovative development and redevelopment projects that introduce such “city sense” into their suburban style development patterns. These projects often include mixed-use, medium- or high-density, compact housing developments in aging low-density commercial or industrial areas and are perceived to add to community members’ quality of life.



The Villages, one part of two community-scale mixed-use developments currently being built in Black Diamond, WA

Urban Setting – In an urban setting, higher density often has a greater level of acceptance by communities, generally allowing for a more robust mix of residential, office, and commercial uses. This increased intensity often leads to commercial uses taking on an overall smaller percentage of total floor area, compared to its residential and office counterparts. Two factors that contribute to the success of urban scale mixed-use are multi-modal access and more intense use of the land (e.g. the use of parking decks in place of surface parking lots). Transit-oriented development is an excellent form of mixed use for these areas, focusing higher-density/intensity mixed-use around and near transit stops.



Urban mixed-use in Bellevue, WA

Sources

Text sources

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Image Sources

[Mariner's Ridge Condominiums](#) in Anacortes, WA

[Claremont Apartments](#) in Seattle, WA

Mixed-use in Vancouver, WA (Commerce stock photo)

Urban mixed-use in Bellevue, WA (Commerce stock photo)

[Riverpark Complex](#) in Redmond, WA

[The Villages](#) in Black Diamond, WA

Energy Efficiency [Table 1](#)